AMENDMENTS

In the claims

Please cancel claims 26-38 without prejudice, estoppel or disclaimer.

Please add new claims 51-84:

51. (New) A substantially isolated polynucleotide comprising a polynucleotide sequence encoding an antigen binding fragment which specifically recognizes a tumor cell surface epitope specifically recognized by an antibody or fragment thereof comprising the amino acid sequences of the H chain V region and the L chain V region of the polypeptide shown in SEQ ID N0:14.

52. (New) The polynucleotide of claim 51, wherein said antigen binding fragment specifically recognizes a heptapeptide displayed by peptide phage display, said heptapeptide selected from the group consisting of:

Phe-His-Arg-Tyr-Ser-Leu-Pro (SEQ ID NO:20);
Phe-His-Arg-Tyr-Ser-Asp-Tyr (SEQ ID NO:21);
Phe-His-Arg-Tyr-Ser-Pro-Thr (SEQ ID NO:23);
Phe-His-Arg-Tyr-Thr-Pro-Gly (SEQ ID NO:24); and
Met-His-Arg-Tyr-Thr-Pro-Leu (SEQ ID NO:28).

53. (New) The polynucleotide of claim 51, wherein the antigen-binding fragment specifically recognizes an N-terminus pentapeptide consensus sequence Phe-His-Arg-Tyr-Ser/Thr displayed as part of a heptapeptide by peptide phage display.

54. (New) The polynucleotide of claim 51, wherein the polynucleotide encodes at least 5 amino acids of the amino acid sequences of the H chain V region and the L chain V region of the polypeptide shown in SEQ ID N0:14.

55. (New) The polynucleotide of claim 54, wherein the polynucleotide encodes the amino acid sequence of the H chain V region or the L chain V region of the polypeptide shown in SEQ ID NO:14.

56. (New) The polynucleotide of claim 51, wherein the polynucleotide comprises at least 20 consecutive nucleotides of the nucleotide sequence of the H chain V region and the L chain V region of the polynucleotide shown in SEQ ID NO:13.

57. (New) The polynucleotide of claim 56, wherein the antigen binding fragment is a scFv.

58. (New) The polynucleotide of claim 51, wherein the polynucleotide encodes at least 5 consecutive amino acids of SEQ ID NO: 2 or 5.

59. (New) A substantially isolated first polynucleotide comprising a region of at least 20 consecutive nucleotides which forms a stable duplex under stringent conditions with a complement of a second polynucleotide, wherein the second polynucleotide encodes an antibody or fragment thereof having the amino acid sequences of the H chain V region and the L chain V region of the polypeptide shown in SEQ ID N0:14, and wherein the first polynucleotide encodes an antigen binding fragment which inhibits specific binding of the antibody or fragment thereof to a tumor cell surface epitope.

60. (New) The polynucleotide of claim 59, wherein the second polynucleotide comprises the nucleotide sequence of the H chain V region and the L chain V region of the polynucleotide shown in SEQ ID NO:13.

61. (New) The polynucleotide of claim 60, wherein the first polynucleotide comprises a region of at least 100 consecutive nucleotides which forms a stable duplex under stringent conditions with the complement of the second polynucleotide.

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Docket No. 316082000121
Client Reference IN-013-IS-1A14

62. (New) The polynucleotide of claim 60, wherein the first polynucleotide comprises a region of at least 200 consecutive nucleotides which forms a stable duplex under stringent conditions with the complement of the second polynucleotide.

63. (New) The polynucleotide of claim 60, wherein the antigen binding fragment is a scFv.

64. (New) The polynucleotide of claim 60, wherein the region of at least 20 consecutive nucleotides forms a stable duplex under stringent conditions with a complement of a portion of the second polynucleotide, said portion encoding amino acids of the antibody or fragment thereof which define the specificity of the antibody or portion thereof.

65. (New). The polynucleotide of claim 60, wherein the region of at least 20 consecutive nucleotides forms a stable duplex under stringent conditions with a complement of a portion of the second polynucleotide, said portion encoding a CDR of the antibody or fragment thereof.

66. (New) The polynucleotide of claim 60, wherein the region of at least 20 consecutive nucleotides forms a stable duplex under stringent conditions with a complement of a portion of the second polynucleotide, said portion encoding at least seven consecutive amino acids of the heavy chain CDR2 or CDR3 region of said antibody or fragment thereof.

67. (New) The polynucleotide of claim 60, wherein the region of at least 20 consecutive nucleotides forms a stable duplex under stringent conditions with a complement of a portion of the second polynucleotide, said portion encoding at least 25 amino acids of a variable region of said antibody.

68. (New) polynucleotide of claim 60, wherein the region of at least 20 consecutive nucleotides forms a stable duplex under stringent conditions with a complement of a portion of the second polynucleotide, said portion encoding at least 30 amino acids of a variable region of said antibody.

69. (New) The polynucleotide according to claims 51 or 59, wherein polynucleotide further encodes at least one chemically functional moiety.

70. (New) The polynucleotide according to claim 69, wherein the at least one chemically functional moiety is selected from the group consisting of a signal peptide, an agent that enhances immunologic reactivity, an agent that facilitate coupling to a solid support, a carrier, a bioresponse modifier, a toxin, and a drug.

71. (New) The polynucleotide according to claim 70, wherein the signal peptide is prokaryotic.

72. (New) The polynucleotide according to claim 70, wherein the agent that enhances immunologic reactivity is a bacterial superantigen.

73. (New) The polynucleotide according to claim 70, wherein the bioresponse modifier is a cytokine.

74. (New) The polynucleotide according to claim 70, wherein the toxin is selected form the group consisting of ricin, pokeweed antiviral protein, Pseudomonas exotoxin A, diphtheria toxin, ricin A chain, restrictocin, and phospholipase enzymes.

75. (New) The polynucleotide according to claim 51 or 59, wherein the antigen binding fragment is selected from the group consisting of whole native antibodies, bispecific antibodies, chimeric antibodies, Fab, F(ab')2, single chain V region fragments (scFv) and fusion polypeptides.

76. (New) The polynucleotide according to claim 51 or 59, wherein said antigen-binding fragment is an antigen-binding fragment of a human antibody.

77. (New) The polynucleotide according to claim 51 or 59, wherein said antigen binding fragment specifically recognizes any one or more of at least glioma, melanoma, breast

carcinoma, lung carcinoma, ovarian carcinoma, lymphoma, gastric carcinoma, colon carcinoma or prostate carcinoma cells, but does not recognize normal, non-cancerous cells of at least brain, skin, breast, lung, ovary, lymph node, large intestine and prostate tissues.

78. (New) The polynucleotide according to claim 51 or 59, wherein the antigen binding fragment comprises human immunoglobulin sequences.

79. (New) The polynucleotide according to claim 51 or 59, wherein said antigen-binding fragment comprises human framework sequences.

80. (New) A cloning vector comprising a polynucleotide according to claims 51 or 59.

81. (New) An expression vector comprising a polynucleotide according to claims 51 or 59.

82. (New) A host cell comprising a polynucleotide according to claims 51 or 59.

83. (New) A composition comprising a polynucleotide according to claims 51 or 59.

84. (New) A process for making an antigen binding fragment by expressing a polynucleotide according to claims 51 or 59 in a host cell.